

REMARKS

Claims 33-36 have been canceled, therefore claims 1-32 are pending in the application.. In the September 14, 2005 Office action, the drawings were objected to for allegedly having reference designator 504 of Fig. 5 not described in the specification. Claims 13 and 14 were rejected under 35 USC § 112 second paragraph for allegedly using the term “the resonant frequency” without antecedent. Claims 1-4 were rejected under 35 USC § 102(b) as being anticipated by Besson, GB Patent Publication 1,057,853, claims 5-7 and 9-32 were rejected under 35 USC § 103(a) as being unpatentable over Besson in view of Broersma, United States Patent No. 4,126,769, and claims 8 and 27 were rejected under 35 USC § 103(a) over Besson and Broersma in further view of Dolleman et al., United States Patent No. 6,078,677. The applicants respond as follows.

DRAWING OBJECTION

With respect to the objection to Fig. 5, the specification at paragraph [0035] has been amended to change the erroneous second instance of reference number 502 to recite reference number 504. It is clear from the context of paragraph [0035] and Fig. 5 that the comparison of vibration force is between curve 502 and curve 504, with curve 502 showing “vertical vibration force is improved (i.e. reduced) at all frequencies up to 7 KHz.” No new matter was introduced. In view of the amendment, the applicants request the objection be withdrawn.

SECTION 112 REJECTIONS

Regarding the rejection of claims 13 and 14 for allegedly lacking antecedent for the term “the resonant frequency,” the claims have been amended to recite “a resonant frequency.” The applicants request the rejected be withdrawn.

SECTION 102(b) REJECTIONS

The applicants respectfully traverse the rejection of claims 1-4 under 35 USC § 102(b) as being anticipated by Besson. Claim 1 recites, in part, “the paddle has a second inertial mass such that momentum created by a movement of the armature is approximately

equal to a momentum created by movement of the diaphragm.” A device in accordance with the current disclosure matches momentum of the armature and diaphragm to minimize vibration transferred to the outer case (see Fig. 5.).

The examiner alleges that Besson anticipates this element of claim 1, at page 1, lines 9-62. This section, after a recitation regarding size and effectiveness of magnetic field, recites at lines 49-53, “[t]he drive pin in this microphone unit may be made readily adjustable in mass so that the frequency response of the unit can be varied as desired in the course of production.” The reference to the mass of the drive pin (ref # 21) here and on page 4 relates to adjusting the frequency response, that is, an input-to-output transfer characteristic of the output of the device and does not teach or suggest anything about selecting the mass to affect the corresponding momentum of the armature (ref #s 8 & 9) and the diaphragm (ref # 22). Modifying the mass of the drive pin (#21), the equivalent of the linkage assembly of claim 1, does not teach or suggest modifying the mass of the paddle, particularly selecting masses of the armature and the paddle to affect momentum. Because Besson does not discuss the inertial mass of the armature or the momentum of either the armature or the diaphragm, it does not teach or suggest the limitation of claim 1 recited above. The requirement for a rejection under 35 USC § 102(b), that the reference teach every limitation of the claim, is not met by the Besson reference and therefore, the applicants request the rejection be withdrawn.

Since claim 1 is allowable, its respective dependent claims also rejected under 35 USC § 102(b), claims 2-4, are also allowable and their rejection should also be withdrawn.

SECTION 103(a) REJECTIONS

Claims 5-7 and 9-32, including independent claims 15, 21, and 33 have been rejected under 35 USC § 103(a) over Besson in view of Broersma, with claims 8 and 27 rejected over Besson and Broersma in further view of Dolleman.

Claims 5-7 and 9-14 each depend from independent claim 1. As discussed above, the Besson reference does not teach every limitation of claim 1, specifically, that masses of each are selected such that the momentum of the armature is approximately equal

to a momentum created by the movement of the diaphragm. The Broersma reference does not supply this teaching missing in Besson. With respect to claim 8, also dependent from claim 1, neither does the Dolleman reference supply this missing teaching of Besson. Because the combination of Broersma with Besson, or Broersma and Dolleman with Besson do not teach each limitation of claim 1, the combination does not teach every limitation of claims 5-14. Therefore, the combination does not render unpatentable claims 5-14. Therefore the rejection of claims 5-14 should be withdrawn.

Independent claim 15 recites, in part, "wherein the paddle has a lowest frequency resonance greater than 7.5 KHz." A device in accordance with the present disclosure has a reduced vibration force due to armature and diaphragm inertia masses, see Fig. 5. The Besson reference discusses frequency response, that is, the transfer function of energy from input to output by frequency as a function of drive pin mass (Besson, page 1, lines 49-53). Similarly, the Broersma reference discusses adjusting the frequency response of the receiver (Col. 3, lines 29-43). Neither Besson nor Broersma, separately or in combination teach anything about the frequency resonance of the paddle, especially that it be greater than 7.5 KHz. The Besson and Broesma references separately or in combination do not teach or suggest the paddle has a lowest frequency resonance greater than 7.5 KHz. Since the references do not teach each limitation of claim 15, claim 15 is allowable and the rejection should be withdrawn. Because claims 16-20 depend from allowable claim 15, claims 16-20 are allowable and their rejection should also be withdrawn.

Independent claim 21 also recites, in part, "momentum created by a movement of the armature is approximately equal to a momentum created by movement of the diaphragm." The Besson reference does not teach or suggest that the momentum created by a movement of the armature is approximately equal to a momentum created by movement of the diaphragm. At most, the Besson reference teaches that changing the mass of the drive pin (ref #21) can be used to change a vibration frequency of the receiver. Besson does not discuss the inertial mass of either the armature or the diaphragm. Neither does Broersma teach or suggest selection of the masses of each of these structures such that the momentum created by a movement of the armature is approximately equal to a momentum created by

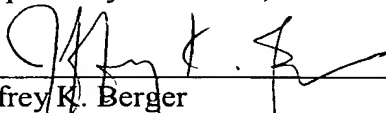
movement of the diaphragm. Neither Besson nor Broersma teach or suggest anything about momentum of these structures. Therefore, the combination of Besson and Broersma does not teach or suggest every element of claim 21. The rejection of independent claim 21 should be withdrawn. Because claims 22-26 and 28-32 depend from allowable claim 21, these claims are also allowable and their rejection should be withdrawn. With respect to claim 27, the addition of Dolleman to the combination of Besson and Broersma does not add the missing teaching of Besson with respect to momentum created by movement of the armature or momentum created by movement of the diaphragm. Because the combination of Besson, Broersma and Dollerman does not teach or suggest all the limitations of claim 27, the combination does not render claim 27 obvious. The rejection of claim 27 should also be withdrawn.

In view of the above arguments and amendments, the applicants believe the pending application is in condition for allowance and passage to issuance is respectfully requested.

The applicants believe no fee is due with this response. However, if a fee is due, the Commissioner is directed to Deposit Account No. 13-2855.

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Respectfully submitted,

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